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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09-647,479	09/29/2000	Barry Huston Meyrick	PM-271586 SM	7070

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EXAMINER

SHOSHO, CALLIE E

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 09/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/647,479

Applicant(s)

MEYRICK ET AL.

Examiner

Callie E. Shosho

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-8 and 11-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-8 and 11-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 3, 5-8, and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 732381, alone, or alternatively, in view of Lent et al. (U.S. 5,837,042).

The rejection is adequately set forth in paragraph 5 of the office action mailed 8/8/01, Paper No. 4, and is incorporated here by reference.

3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over EP 732381, alone, or alternatively, in view of Lent et al. as applied to claims 3, 5-8, and 11-13 above, and further in view of Suzuki et al. (U.S. 6,153,001).

Response to Arguments

4. Applicants' arguments filed 7/15/02 have been fully considered but they are not persuasive.

Specifically, applicants argue that:

(a) EP 732381 discloses crosslinked polyurethane while presently claimed polyurethane is not crosslinked.

(b) EP 732381 discloses colorant encapsulated by polyurethane not colorant and polyurethane separately as presently claimed.

(c) EP 732381 does not disclose mixture of water-miscible solvent and water-immiscible solvent as presently claimed.

(d) No motivation to combine EP 732381 with Suzuki et al.

With respect to argument (a), it is agreed that EP 732381 discloses crosslinked polyurethane. However, page 5, lines 34-35 of EP 732381 discloses that the crosslinked polyurethane is in the form of an aqueous dispersion, i.e. the polyurethane is in fact water-dissipatable as presently claimed. Additionally, page 9, lines 7-8 of EP 732781 discloses that solvents are used in order to improve the dispersability of the aqueous phase.

Applicants argue that the claimed polyurethane is obtained from the reaction of diisocyanate and compound having one or two isocyanate groups and thus, is linear.

However, it is the examiner's position that the present claims are open to both crosslinked and uncrosslinked polyurethane. While the present claims recite polyurethane that is obtained nominally from the recitation of at least one diisocyanate and at least one compound having isocyanate-reactive groups, it is noted that the absence of additional ingredients, such as crosslinking agents, does not necessarily imply that the scope of the claims does not encompass such agents. In order to determine whether applicants are justified in asserting that their claims are limited to "linear" or uncrosslinked polyurethane, it is appropriate to turn to the instant specification for clarification. In particular attention is drawn to (i) page 1, line 29 of the present specification which uses open language of "comprising" to describe the scope of the kind and

number of ingredients of which the present polyurethane is comprised and (ii) applicants' Example 2 at page 10 which shows the use of Jeffamine, which is recognized in the art to be a polyamine, as one of several reactants used to synthesize the claimed polyurethane. It is noted that a polyamine is disclosed as an example of a crosslinking agent by EP 732381 currently applied against the present claims. Should applicants argue that the polyamine is not used as a crosslinking agent in the present invention, nevertheless, given the disclosure of EP 732381, it is clear that polyamine would intrinsically function as a crosslinking agent.

In light of the above, and further, given that the claims must be given the broadest possible interpretation consistent with the specification (see MPEP 2111 at p.2100-46 in the Aug 2001 edition), it would appear that applicants not only lack support to interpret the claims as excluding crosslinking agents, but on the contrary, that they exemplify the use of a polyamine crosslinking agent. Therefore, in view of the above discussion, applicants' contention that the scope of the present claims is limited to "linear" or uncrosslinked polyurethane is unpersuasive.

With respect to argument (b), it is noted that the present claims require that the ink comprise colorant and polyurethane. There is no limit on how these ingredients are present in the ink. Although EP 732381 discloses ink comprising colorant encapsulated by polyurethane rather than the colorant independent of the polyurethane, the fact remains that the ink does in fact contain colorant and polyurethane, and thus encompasses the scope of the present claims.

With respect to argument (c), it is noted that page 5, lines 34-35 of EP 732381 discloses that the polyurethane is present in the form of an aqueous dispersion, while page 9, lines 7-9 and

12-14 disclose the use of water-immiscible solvent as part of the dispersion used in order to improve dispersability. Given that the polyurethane dispersion is added to other ingredients in order to form ink, it is clear that the water-immiscible solvent, which is part of the dispersion, is also part of the ink.

With respect to argument (d), Suzuki et al. discloses that monohydric alcohols such as aliphatic alcohols having 1 to 4 carbon atoms and benzyl alcohol are added to ink in order to produce ink with good drying time that produces clear images. Applicants argue that given that EP 732731 already discloses aliphatic alcohols such as ethanol, there is no motivation to include benzyl alcohol in the ink of EP 732381.

However, it is noted that col.12, lines 54-55 of Suzuki et al. disclose that the one or more monohydric alcohols can be used, i.e. ink can contain ethanol and benzyl alcohol. Further, page 10, lines 50-51 of EP 732381 disclose that the ink is not limited to only aliphatic alcohols such as ethanol. Additionally, given the equivalence and interchangeability of aliphatic alcohol such as ethanol with benzyl alcohol as disclosed by Suzuki et al., it would have been obvious to one of ordinary skill in the art to use benzyl alcohol instead of ethanol in the ink of EP 732381.

Applicants also argue that Suzuki et al. teaches against using benzyl alcohol by advising against including hydrophobic solvents in the ink. It is noted that col.12, lines 39-40 of Suzuki et al. disclose that hydrophobic solvents impair the dispersability of self-dispersing pigment. However, such pigments are not present in the ink of EP 732381. Further, given that Suzuki et al. also discloses the use of benzyl alcohol, it is clear that the use of such solvent is permissible in the ink.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 703-305-0208. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Callie Shosho
9 17 02

C.S.

Vasu Jagannathan
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